

LISTING OF THE CLAIMS

Please **AMEND** claims 13 and 18.

Please **ADD** claim 25

1-12. (Cancelled)

13. (Currently Amended) An activated carbon foam comprising a surface area ranging from about $10 \text{ m}^2/\text{g}$ to about $25 \text{ m}^2/\text{g}$ manufactured by the process comprising:

heating swellable particulate coal ~~having a free swell index ranging from about 3.5 to about 5.0 in a mold at a heat-up rate of about $2^\circ\text{C}/\text{minute}$ up to a temperature between about 300°C and about 700°C of about 600°C~~ under a non-oxidizing atmosphere at a pressure ranging from about 25 psi to about 500 psi and soaking at said temperature ~~for a time period ranging from about 2 hours to about 6 hours~~ from about 10 minutes to about 12 hours to produce a carbon foam; and

activating said carbon foam by ~~placing said carbon foam into a heated container and~~ flowing an activation agent through said carbon foam ~~into said heated container at a rate in the range of about $1 \text{ ft}^3/\text{minute}$ to about $10 \text{ ft}^3/\text{minute}$ for a time for a period ranging from about 1 hour to about 12 hours at a temperature ranging from about 600°C to about 1200°C , thus~~ producing an activated carbon foam; and

~~cooling said heated swellable particulate to a temperature below about 100°C to form a carbon foam having a first overall surface area.~~

14. (Previously Presented) The activated carbon foam of claim 13, wherein the activating agent comprises ozone.
15. (Previously Presented) The activated carbon foam of claim 13, wherein the activating agent comprises carbon dioxide.
16. (Previously Presented) The activated carbon foam of claim 13, wherein the process further comprises the step of carbonizing the carbon foam to form a carbonized foam by heating to a temperature ranging from about 600°C to about 1600°C in an inert atmosphere and holding at the temperature for a period of time ranging from about 1 hour to about 3 hours.
17. (Previously Presented) The activated carbon foam of claim 13, wherein the process further comprises the step of graphitizing said carbon foam by heating said carbon foam to a temperature ranging from about 1700°C to about 3000°C in an inert atmosphere and holding at the temperature for a period of time less than about 1 hour.
18. (Currently Amended) An activated carbon foam comprising an open-celled carbon foam having a density up to about 0.8 g/cc, a surface area ~~up to~~ from about 10 m²/g to about 25 m²/g, wherein a surface of the open-celled carbon foam is sealed.
19. (Previously Presented) The activated carbon foam of claim 18, wherein the carbon foam has a density between about 0.1 g/cc and about 0.8 g/cc.
20. (Previously Presented) The activated carbon foam of claim 18, wherein the carbon foam has a surface area between about 10 m²/g and about 25 m²/g.

21. (Previously Presented) The activated carbon foam of claim 18, wherein the carbon foam has a surface area between about 15 m²/g and about 20 m²/g.
22. (Previously Presented) The activated carbon foam of claim 18, wherein the carbon foam is impregnated with a polymer.
23. (Previously Presented) The activated carbon foam of claim 18, wherein the carbon foam is impregnated with an epoxy resin.
24. (Previously Presented) The activated carbon foam of claim 18, wherein the carbon foam is impregnated with a petroleum pitch.
25. (New) The activated carbon foam of claim 13, wherein the activation agent is introduced to said carbon foam at a rate in the range of about 1 ft³/minute to about 10 ft³/minute.